

REMARKS

This responds to the Office Action mailed on October 24, 2003.

Claims 2 and 3 are amended, claims 11-19 are withdrawn, claims 10, 20-62 have been canceled without prejudice, and claims 63-76 are added; as a result, claims 1-9, 11-19, and 63-76 are now pending in this application.

Specification Amendment

The specification has been amended for clarity. No new matter has been added.

Claim Objection

Claim 3 was objected to due to alleged informalities. It is believed that the present amendment to claim 3 obviates the objection.

§112 Rejection of a Claim

Claim 2 was rejected under 35 USC § 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicants believe that the present amendment to claim 2 obviates the rejection.

§103 Rejection of the Claims

Claims 1, 4-7 and 9 were rejected under 35 USC § 103(a) as allegedly being unpatentable over Dibene, II et al. (U.S. 6,452,113) in view of Dibene, II et al. (U.S. 6,452,804). Claims 2 and 3 were also rejected under 35 USC § 103(a) as allegedly being unpatentable over Dibene, II et al. ('113 and '804) and further in view of Dehaine et al. (U.S. 5,925,925). Claim 8 was also rejected under 35 USC § 103(a) as allegedly being unpatentable over Dibene, II et al. ('113 and '804) and further in view of Dehaine et al. and Banks et al. (U.S. 6,015,722). These rejections are respectfully traversed.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. Applicant respectfully submits that the Office Action did not make out a *prima facie* case of obviousness for the following reasons: (1) There is no suggestion or motivation to

combine the cited references, and (2) even if combined, the cited references fail to teach or suggest all of the elements of applicant's claimed invention.

First, a suggestion to combine must come from the prior art and not from Applicant's specification or impermissible hindsight. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143. The Examiner must avoid hindsight. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Page 5 of the Office Action states that it would have been obvious to incorporate elements of Dibene ('113) with elements of Dibene ('804) so that the mechanical coupling and the component support can be improved in Dibene's ('113) package. However, Dibene ('113) does not suggest that mechanical coupling or component support needs improvement. In fact, Dibene '113 at Col. 10, line 11 states "This frame 1202, when connected to the heatsink 1006 and subsequently connected to a stiffener board 1206 or motherboard and held together by fastener springs 1204, forms a three dimensional enclosure..." There is no suggestion in Dibene '113 or '804 for the claimed combination. Therefore, the suggestion to combine is from impermissible hindsight.

Second, Applicant respectfully submits that the Office Action did not make out a *prima facie* case of obviousness because even if Dibene, et al. ('804) and Dibene, et al. ('113) were combined, they fail to teach or suggest all of the elements of applicant's claimed invention. M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

Claim 1 recites: "...a package stiffener mounted at a perimeter of the substrate, and arranged apart from the die on the substrate to deliver low-inductance current to the die, via the substrate, while concurrently providing stiffening support to the substrate."

The Examiner admits that Dibene, et al. ('113) does not teach, disclose or suggest "the PCB/package frame being a package stiffener concurrently providing a stiffening support." Instead, the Examiner relies on Dibene, et al. ('804) to teach an assembly "delivering a low inductance current, providing mechanical/fastening support to the interposer substrate and also being functional as a stiffener board." However, Dibene, et al. ('804) and Dibene, et al ('113)

(either in combination or alone) does not teach, suggest or disclose “a package stiffener mounted at a perimeter of the substrate, and arranged apart from the die on the substrate to deliver low-inductance current to the die, via the substrate, while concurrently providing stiffening support to the substrate” as claimed, for example, in claim 1. Further, if Dibene, et al. (‘804) and Dibene, et al. (‘113) are combined, the resulting invention would not be the presently claimed invention.

Because neither Dibene, et al. (‘804) nor Dibene, et al. (‘113) discloses, teaches or suggests the claimed subject matter, the examiner has not made out a *prima facie* case of obviousness for claim 1. Therefore, claim 1 is patentable.

New independent claims 63 and 76 have been introduced. Neither Dibene, et al. (‘804) nor Dibene, et al. (‘113) disclose, teach or suggest “a PGID disposed upon the die-side of the substrate, and spaced from the die to deliver low-inductance current to the die, via the substrate, while concurrently providing stiffening support to the substrate” as claimed in claim 63 or “a package stiffener disposed upon the die-side of the substrate, and spaced from the die to deliver low-inductance current to the die, via the substrate, while concurrently providing stiffening support to the substrate, wherein the package stiffener electrically couples the power pod and the substrate” as claimed in claim 76.

Applicants believe that claims 63 and 76 are generic, and allowable for the reasons cited above. Applicants respectfully request entry of the amendment and examination of these new claims. Applicants believe that these new claims fall within the ambit of the previous search, such that the Examiner does not need to make an additional search. Applicants believe these additional claims are in condition for allowance. In order to comply with the election of species requirement, Applicants submit that new claims 63-76 are within elected species A, Figs. 1-7, and 11-13.

Because claims 2-9, and 64-75 depend from either claims 1 or 63, and contain additional limitations that are patentably distinguishable over Dibene, et al. (‘804) and Dibene, et al. (‘113), these claims are also considered to be patentable over Dibene, et al. (‘804) and Dibene, et al. (‘113).

Accordingly, claims 2-9 and 63-76 are deemed to be in condition for allowance.

Formal Drawings Submission

Formal drawings are submitted herewith. It is respectfully requested that these formal drawings be reviewed and approved by the Examiner.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Lucinda Price, at (352) 331-0202, or Applicant's below-named representative to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

KRISTOPHER FRUTSCHY ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
Attorneys for Intel Corporation
P.O. Box 2938
Minneapolis, Minnesota 55402
(612) 373-6970

Date December 18, 2003

By Charles E. Steffey
Charles E. Steffey
Reg. No. 25,179

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 18 day of December, 2003.

KACIA LEE
Name

Kacia Lee
Signature